

Service
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Service Manual



12 V



DIGITAL
dcc
COMPACT CASSETTE



PHILIPS

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TECHNICAL DATA

GENERAL

Power supply:	14,4 V
Quiescent current:	< 2.0 mA
Playback current:	2,8 A (4x5 W)

TUNER

FM	87.5 - 108 MHz	grid: 100 kHz search, 100 kHz manual
MW	531 - 1611 kHz (565 - 186 m)	grid: 9 kHz search, 1 kHz manual
LW	144 - 288 kHz (2083 - 1042 m)	grid: 9 kHz search, 9 kHz manual
SW	5.95 - 6.2 MHz (50.4 - 48.4 m)	grid: 5 kHz search, 5 kHz manual
Presets: 6 FM1, 6 FM2, 6 FM-AST, 6 SW, 6 MW, 6 LW		
Sensitivity 26 dB S/N:		FM: 4 µV
		SW: 28 µV
		MW: 28 µV
		LW: 56 µV
IF (FM / AM):		10.7 MHz












COMPACT CASSETTE

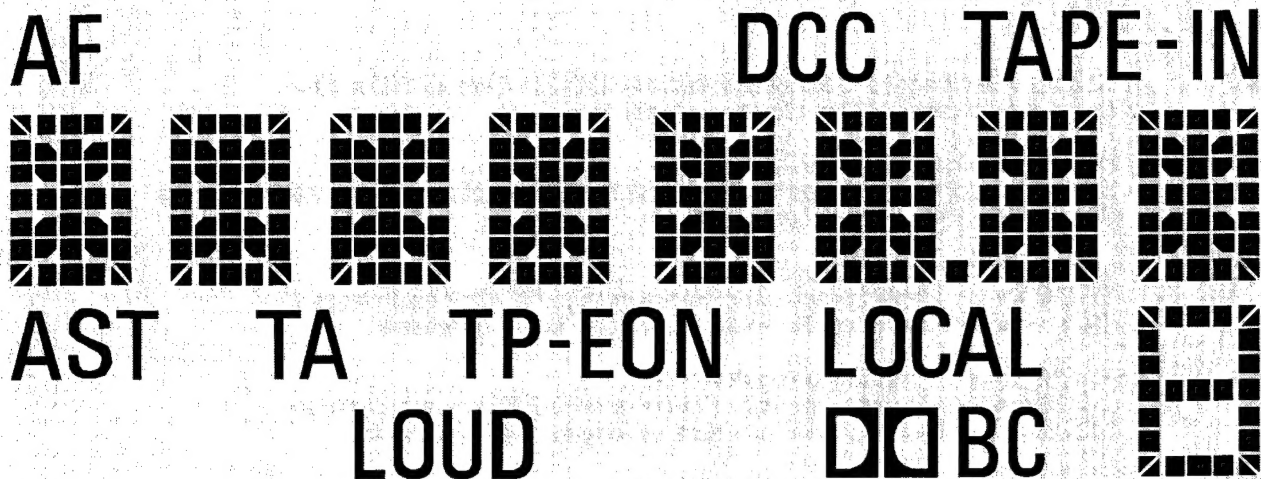
Number of tracks:	2x2
Tape speed:	4,75 cm/s
Winding time:	100 s (C60)
Frequency response:	40 - 14.000 Hz
Wow and flutter:	0.2% (IEC 386 / DIN 45507)
S/N ratio (DOLBY OFF):	FE: 48 dB (weighted)
	CR: 53 dB (weighted)

AMPLIFIER

Output:	4 x 4.5 W sinus (at 10% THD)
Bass:	+/- 12 dB (100 Hz), 2 dB steps
Treble:	+/- 12 dB (10 KHz), 2 dB steps
Channel separation:	> 30 dB
Telefonmute:	> -40 dB

CONTROLS

	Retrac handle release
POWER 	set on/off
EJECT 	<i>Short press:</i> Changes the play direction of a DCC or Compact Cassette <i>Long press:</i> Ejects DCC or Compact Cassette
NEXT 	<i>Radio operation:</i> Search tuning upwards <i>DCC/Compact Cassette operation:</i> Selects next tracks of a DCC/Compact Cassette <i>CD operation:</i> Next track of actual disc
	<i>Radio operation:</i> Manual tuning upwards <i>DCC/Compact Cassette operation:</i> Fast winding DCC/Compact Cassette <i>CD operation:</i> Fast forward playback as long as key is depressed
	<i>Radio operation:</i> Manual tuning downwards <i>DCC/Compact Cassette operation:</i> Fast rewind DCC/Compact Cassette <i>CD operation:</i> Fast backward playback as long as key is depressed
PREV 	<i>Radio operation:</i> Search tuning downwards <i>DCC/Compact Cassette operation:</i> Selects previous tracks of a DCC/Compact Cassette <i>CD operation:</i> Previous track of actual disc
	Volume, Bass or Treble down; Balance to left; Fader to rear
	Volume, Bass or Treble up; Balance to right; Fader to front
BASS BAL	Bass/Balance selector
TREB FAD	Treble/Fader selector
MUTE	Audio Mute; interrupts playback of DCC, Compact Cassette or CD (pause)
1  ... 6	<i>Radio operation:</i> Station presets <i>CD operation:</i> Disc selection
1 	Dolby Noise Reduction B or C type (only for Compact Cassette)
LOUD RST	<i>Short press:</i> Loudness <i>Long press:</i> Audio reset
DISP	<i>Radio operation:</i> Shows the frequency and the selected wave band instead of the station-name <i>DCC operation:</i> Selects the DCC text mode (only with pre-recorded DCC's) <i>CD operation:</i> Shows total number of tracks and total play time of actual disc
LOC	Selector for strong (local) stations
TA	<i>Short press:</i> Traffic information/announcement <i>Long press:</i> Skips a traffic message
BAND RND	<i>Radio operation:</i> Selects the desired wave band (FM1, FM2, FM3, MW, LW, SW) <i>CD operation:</i> Random track selection of actual disc <i>Long press:</i> Enters the 'INIT' mode
AST SCAN	<i>Radio operation:</i> Auto-Store to program the six strongest stations of the current reception area <i>CD operation:</i> 10 sec.- playback of each track of actual disc
SRC	Selects source (Radio, DCC/Compact Cassette or CD-Changer)



DISPLAY INDICATIONS

AF	Tuned station broadcasts RDS information with Alternative Frequencies
DCC	A Digital Compact Cassette is in the cassette deck
TAPE-IN	A Compact Cassette is in the cassette deck <i>Radio operation:</i> Preset station (1 out of 6) is selected <i>DCC/Compact Cassette operation:</i> Indicates side A or B of the DCC/Compact Cassette
LOCAL	Searches for strong (local) stations only Dolby Noise Reduction B or C is switched on (only Compact Cassette)
TP TP-EON	Traffic Program: Indicates that the station broadcasts traffic information A Traffic message is received via Enhanced Other Networks
LOUD	Loudness is switched on
TA	Traffic Announcement mode is switched on Radio operation: Wave band and frequency or (FM only) the station name Audio adjustment: Shows the current settings of Bass, Balance, Treble or Fader DCC operation: Shows track number and elapsed time or text mode(only prerecorded DCC's) INIT mode: Shows initialization parameters and their settings
AST	Auto-Store band chosen (on FM3)

INIT MODE

Select INIT MODE by pressing the BAND key for at least 3 seconds, until a bleep is heard.

The following parameters can be changed when the set is in INIT MODE:

1. Illumination colour

After entering INIT MODE, the display shows 'COLOR'.
Toggle between 'green' or 'orange' colour with the $\hat{+}$ / $\hat{-}$ keys.

2. Viewing angle

After entering INIT MODE, select the 'VIEW' parameter with the \blacktriangleleft PREV or NEXT \blacktriangleright keys.
The display should show 'VIEW 0'.
Select the viewing angle between -1 and 2 with the $\hat{+}$ / $\hat{-}$ keys for best legibility of the display.

3. AF mode

After entering INIT MODE, select the 'AF' parameter with the \blacktriangleleft PREV or NEXT \blacktriangleright keys.
The display should show e.g. 'AF ON'.
Select between 'AF ON' or 'AF OFF' with the $\hat{+}$ or $\hat{-}$ keys.

If you want to store an RDS station without automatic retuning, you have to do the following:
Tune to the desired station.
After entering INIT MODE, select 'AF OFF'.
Leave the INIT MODE (see below) and store this station.

4. AM wave bands on/off

If you don't want to use the AM wave bands (MW, LW and SW), those bands can be switched off.
After entering INIT MODE, select the 'AM' parameter with the \blacktriangleleft PREV or NEXT \blacktriangleright keys.
The display should show e.g. 'AM ON'.
Select between 'AM ON' and 'AM OFF' with the $\hat{+}$ or $\hat{-}$ keys.
When you select 'AM OFF', you can choose only between FM1, FM2 and FM3.

To leave the INIT MODE, press briefly the BAND key.

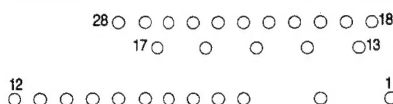
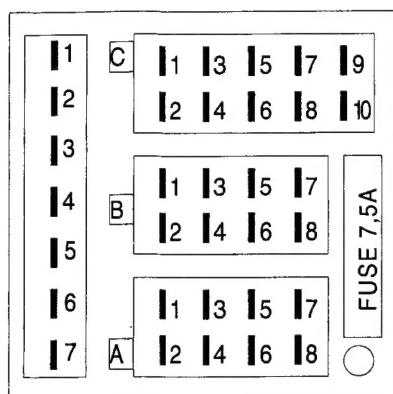
The INIT MODE will be left automatically, when no keys are depressed within 10 seconds.

- NOTE:** For informations about how to use the set see the 'Operating Instructions'.
- NOTE:** The handling of flat pack IC's is described in Service Information A86-100, dated 1986-07-01.
- NOTE:** Switch off power supply before connecting or disconnecting the cassette deck.
- NOTE:** Extension cables for front unit and cassette deck are NOT available as serviceparts.
You can build these by using the coded sockets and plugs.
- NOTE:** Single buttons of the ornamental plate are NOT available.
If there is an absolute need for single buttons you can take apart a complete delivered plate.
- NOTE:** For more information about the RDS feature use the 'computer based training course RDS' which is available at Philips Consumer Service.

Contact: Philips Consumer Electronics
Philips International Support Centre
Building SBP6
NL 5600 MD Eindhoven

tlx routing indicator: NLMEVAB
FAX: + 31 40 73 35 53

CONNECTORBLOCK 22DC811+22DC821



D1: SWITCHED +	> 5	D5: LINE OUT RR	> 9
D2: REMOTE RETURN	> 12	D6: LINE OUT FL	> 10
D3: SIGNAL GND	> 7	D7: LINE OUT RL	> 11
D4: LINE OUT FR	> 8		
C1: GND	> 28	C6: GND	> 6
C2: D2B+ (DC821)	> 27	C7: SWITCHED +	> 16
C3: D2B- (DC821)	> 23	C8: EXT.IN R (DC821)	> 26
C4: NC		C9: EXT.IN L (DC821)	> 3
C5: PERM.+	> 17	C10: EXT.IN GND (DC821)	> 25
B1: RR+	> 22	B5: FL+	> 13
B2: RR-	> 24	B6: FL-	> 19
B3: FR+	> 21	B7: RL+	> 19
B4: FR-	> 22	B8: RL-	> 14
A1: TEL.MUTE	> 15	A5: SWITCHED +	> 5
A2: GND	> 18	A6: EXT.ILL.	> 2
A3: NC		A7: IGN.KEY+ (FUSE)	> 1
A4: PERM.+	> 4	A8: GND	> 18

Key- and Display-test, Romcode version front μ C

- Separate the front unit assy from the set.
- Connector 1801: connect pin 1 + 10 to ground and pin 4 to 5 V - Display shows 'KEY TEST'.

Key-test

When pushing the buttons the concerned indication must be displayed.

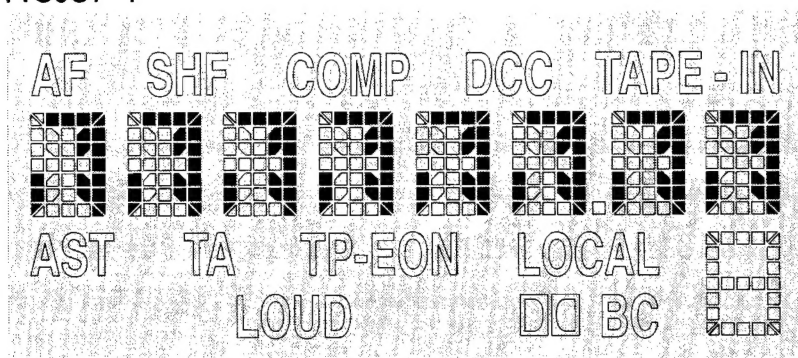
Display-test

- Hold preset 1 - figure Preset 1 must be displayed
- Hold preset 2 - all display-segments are blanked
- Hold preset 3 - figure Preset 2 must be displayed

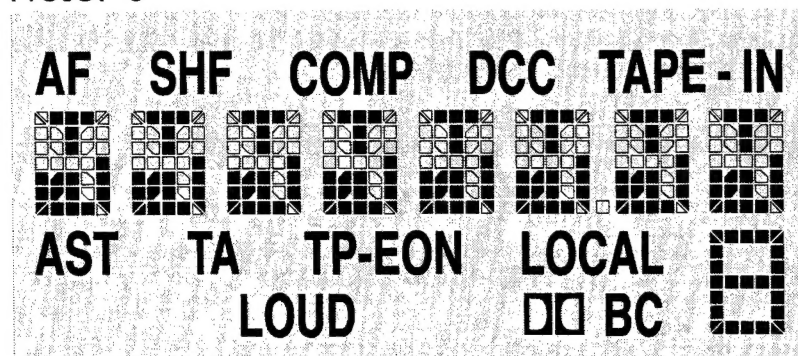
Romcode version

- Hold preset 4 - the software version of the front μ C must be displayed (e.g. RC 04)













Preset 1



Preset 3




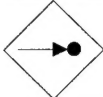

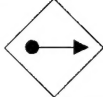






Checks 22DC811 + 22DC821

Check	Band					
Varicap-voltage	AM			<div>144 KHz</div>	IC 7251 PIN 15	> 2,2 V
	FM			<div>6200 KHz</div> <div>87,5 MHz</div> <div>108 MHz</div>	FM 1008 PIN 15	< 6,0 V > 1,0 V < 6,0 V
Demodulated AM - level	AM	990 KHz, 10 mV 1 KHz, 30% AM		<div></div>	IC 7201 PIN 12	350 +/- 100 mV
Demodulated FM - level	FM	93,0 MHz, 1 mV $\Delta f = 22,5$ KHz $f_{mod} = 1$ KHz		<div></div>	FM 1008 PIN 2	160 mV
		93,0 MHz, 1 mV $\Delta f = 6,75$ KHz $f_{mod} = 19$ KHz				45 mV
		93,0 MHz, 1 mV $\Delta f = 3,75$ KHz $f_{mod} = 57$ KHz				20 mV
S/N ratio	FM	93,0 MHz, 1 mV $\Delta f = 22,5$ KHz $f_{mod} = 1$ KHz		<div></div> 	Connectorblock Section B PIN 3 + PIN 5	1,4 V => Referencelevel (dB)
		93,0 MHz, 1 mV $\Delta f = 22,5$ KHz unmodulated				Referencelevel > - 50 dB
	AM	990 KHz, 2mV 30 % mod., 1KHz				1,4 V => Referencelevel (dB)
		990 KHz, 2mV unmodulated				Referencelevel > - 48 dB
Wide band AGC switch	AM	990 KHz, 2mV without modulation		<div></div>	IC 7201 PIN 1	V1 ~ 6,5 V
		990 KHz, 200mV without modulation				V2 ~ 7,0 V (V2 - V1 > 0,5 V)
FM - search - sensitivity	FM	94,1 MHz, 160 μ V $\Delta f = 22,5$ KHz $f_{mod} = 1$ KHz		LO - Search tuning		tuning stop after 2. run
		LO - Search tuning		tuning stop after 1. run		
		DX - Search tuning		no tuning stop		
		DX - Search tuning		tuning stop after 1. run		
AM - search-sensitivity	AM	990 KHz, 240 μ V 1 KHz, 30% AM		LO - Search tuning		tuning stop after 2. run
		LO - Search tuning		tuning stop after 1. run		
		DX - Search tuning		no tuning stop		
		DX - Search tuning		tuning stop after 1. run		

CHECK LOW VOLTAGE CONTROL CIRCUIT

- 1: Supply voltage 14.4 V
Set switched on
Pos. 7701, pin 7 = 4.7 V +/- 400 mV
- 2: Supply voltage 8.3 V +/- 900 mV
Set switches off automatically
Pos. 7701, pin 7 = 0.5 V +/- 500 mV
- 3: Supply voltage 14.4 V
Set switches on
Pos. 7701, pin 7 = 4.7 V +/- 400 mV

Adjustments 22DC811 + 22DC821

Adjustment	Band					
α - 3 dB	FM	94,1 MHz, 1 mV $\Delta f = 22,5$ KHz $f_{mod} = 1$ KHz			Connectorblock Section B PIN 3 + PIN 5	1,4 V => Referencelevel (dB)
		94,1 MHz, 7 μ V $\Delta f = 22,5$ KHz $f_{mod} = 1$ KHz		R 3105		Referencelevel - 3 dB
10 dB Channel-separation	FM	94,1 MHz, 120 μ V $\Delta f = 22,5$ KHz $f_{mod} = 1$ KHz (right channel only) Stereo-Pilot 10%		R 3630	Connectorblock Section B PIN 3 <-> PIN 5	10 dB (+/- 1 dB)
Channel - separation maximum	FM	94,1 MHz, 10 mV $\Delta f = 22,5$ KHz $f_{mod} = 1$ KHz (right channel only) Stereo-Pilot 10%		R 3608	Connectorblock Section B PIN 3 <-> PIN 5	max. (ca. 34 dB)
Check α - 3 dB again and adjust if necessary						
Noise - detector	FM	98,0 MHz, 1 mV $\Delta f = 75$ KHz $f_{mod} = 40$ KHz		R 3426	IC 7420 PIN 14	850 +/- 50 mV (AC)

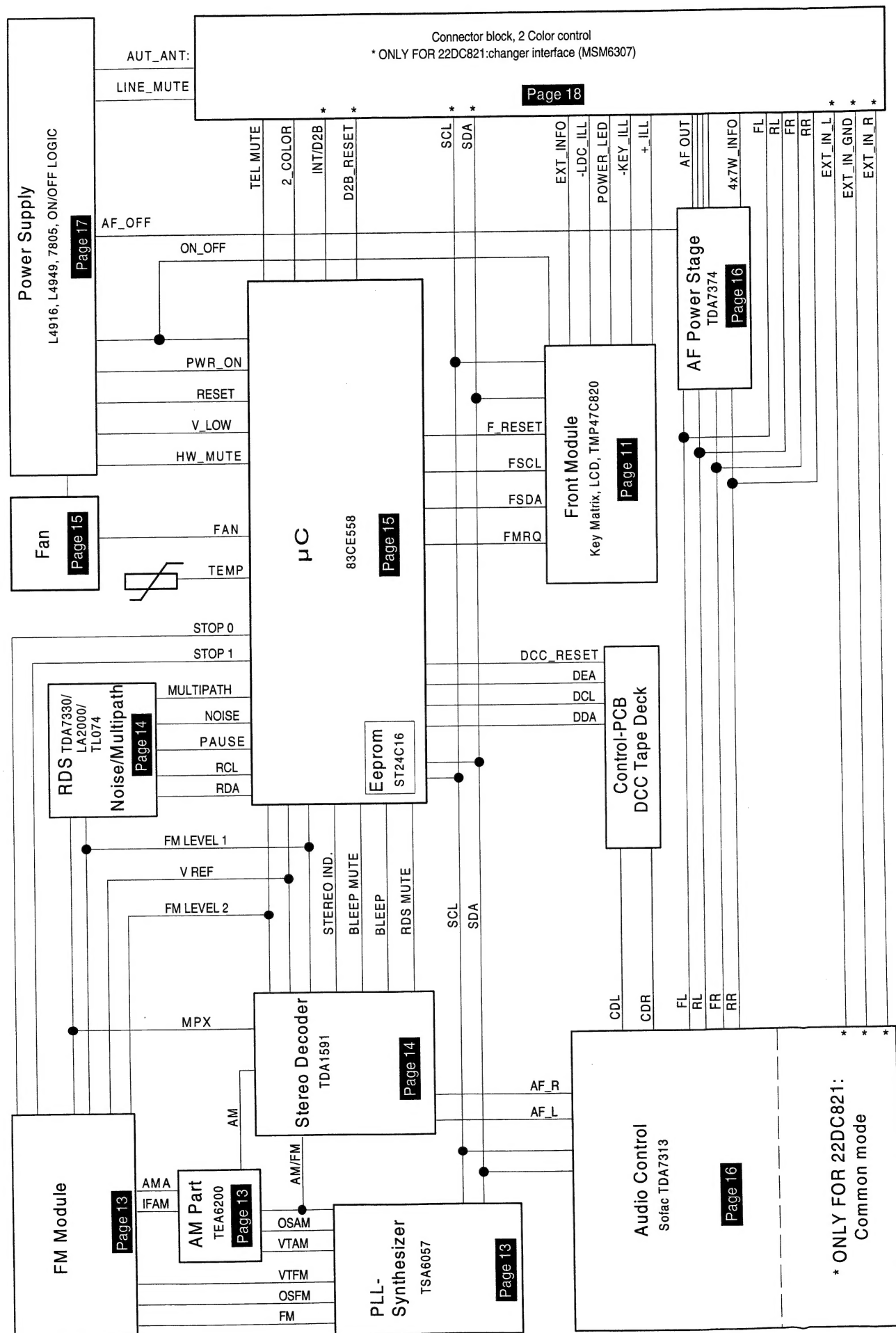
Do not adjust coils 5210 and 5228 (AM-PART), because they are correctly preadjusted by supplier !

! NOTE

FM- and AM- search sensitivities are only adjustable with a special equipment via software.
If you get sets with search sensitivities out of specification, send them to factory-service in Wetzlar until further notice.

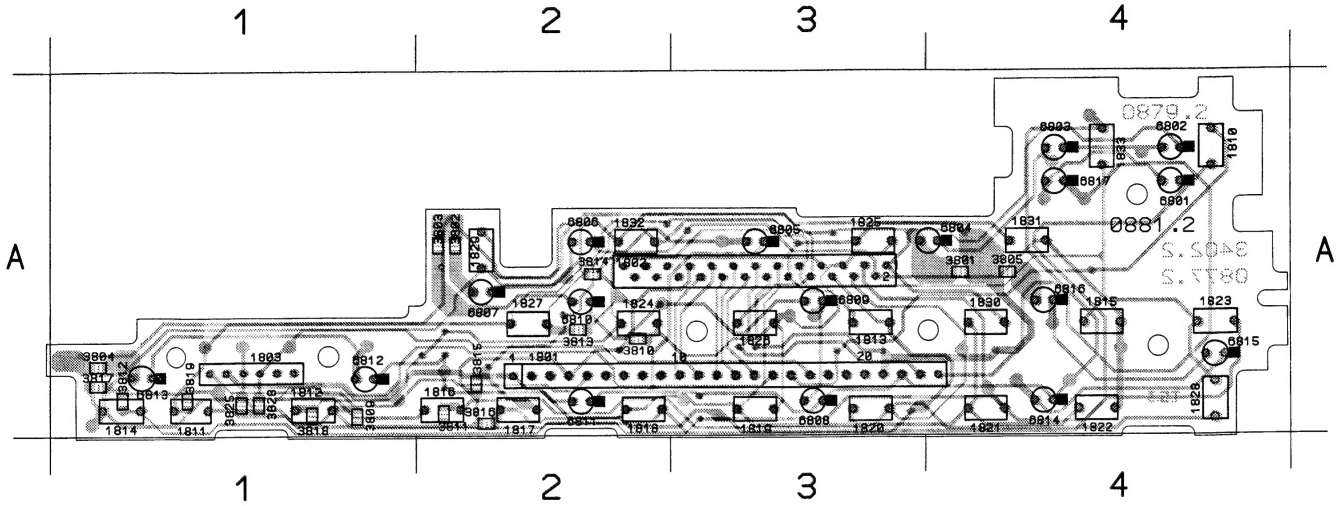
Philips Apparatefabrik Wetzlar
Department SP-CS
Philipsstrasse 1
D - 35576 Wetzlar
GERMANY

WIRING DIAGRAM 22DC811 + 22DC821



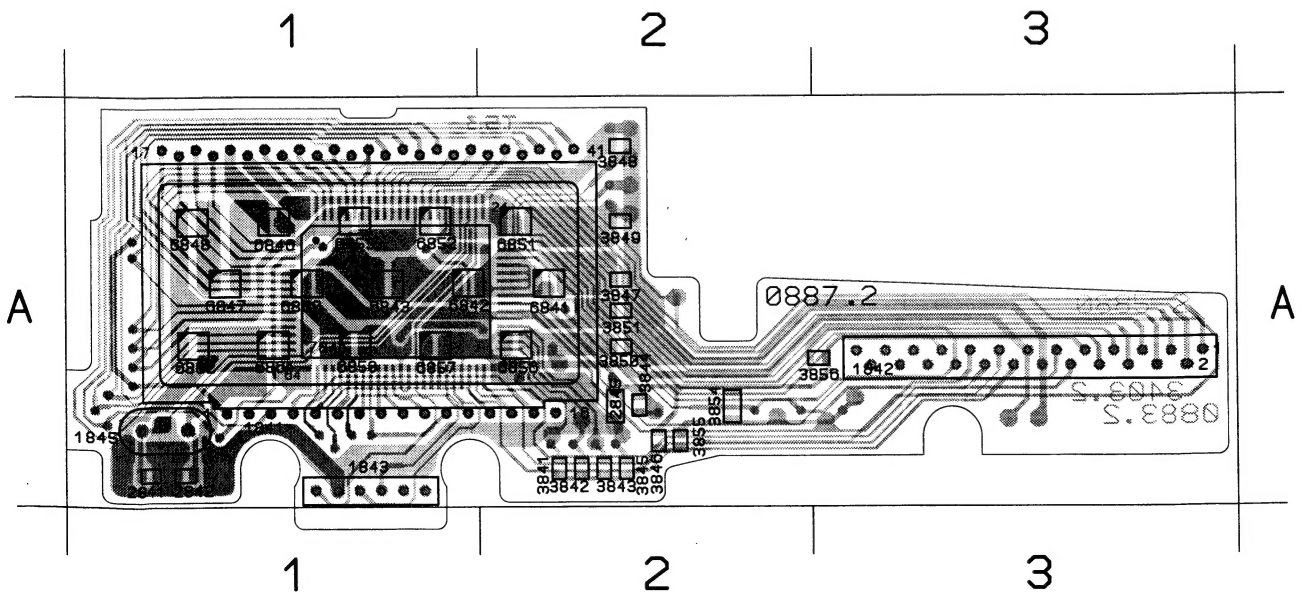
SWITCH PWB

1801 A 3	1812 A 1	1817 A 2	1822 A 4	1827 A 2	1832 A 2	3804 A 1	3812 A 1	3817 A 1	6801 A 4	6806 A 2	6811 A 2	6816 A 4
1802 A 3	1813 A 3	1818 A 2	1823 A 4	1828 A 4	1833 A 4	3805 A 4	3813 A 2	3818 A 1	6802 A 4	6807 A 2	6812 A 1	6817 A 4
1803 A 1	1814 A 1	1819 A 3	1824 A 2	1829 A 2	3801 A 4	3800 A 1	3814 A 2	3819 A 1	6803 A 4	6808 A 3	6813 A 1	
1810 A 4	1815 A 4	1820 A 3	1825 A 3	1830 A 4	3802 A 2	3810 A 2	3815 A 2	3825 A 1	6804 A 4	6809 A 3	6814 A 4	
1811 A 1	1816 A 2	1821 A 4	1826 A 3	1831 A 4	3803 A 2	3811 A 2	3816 A 2	3828 A 1	6805 A 3	6810 A 2	6815 A 4	

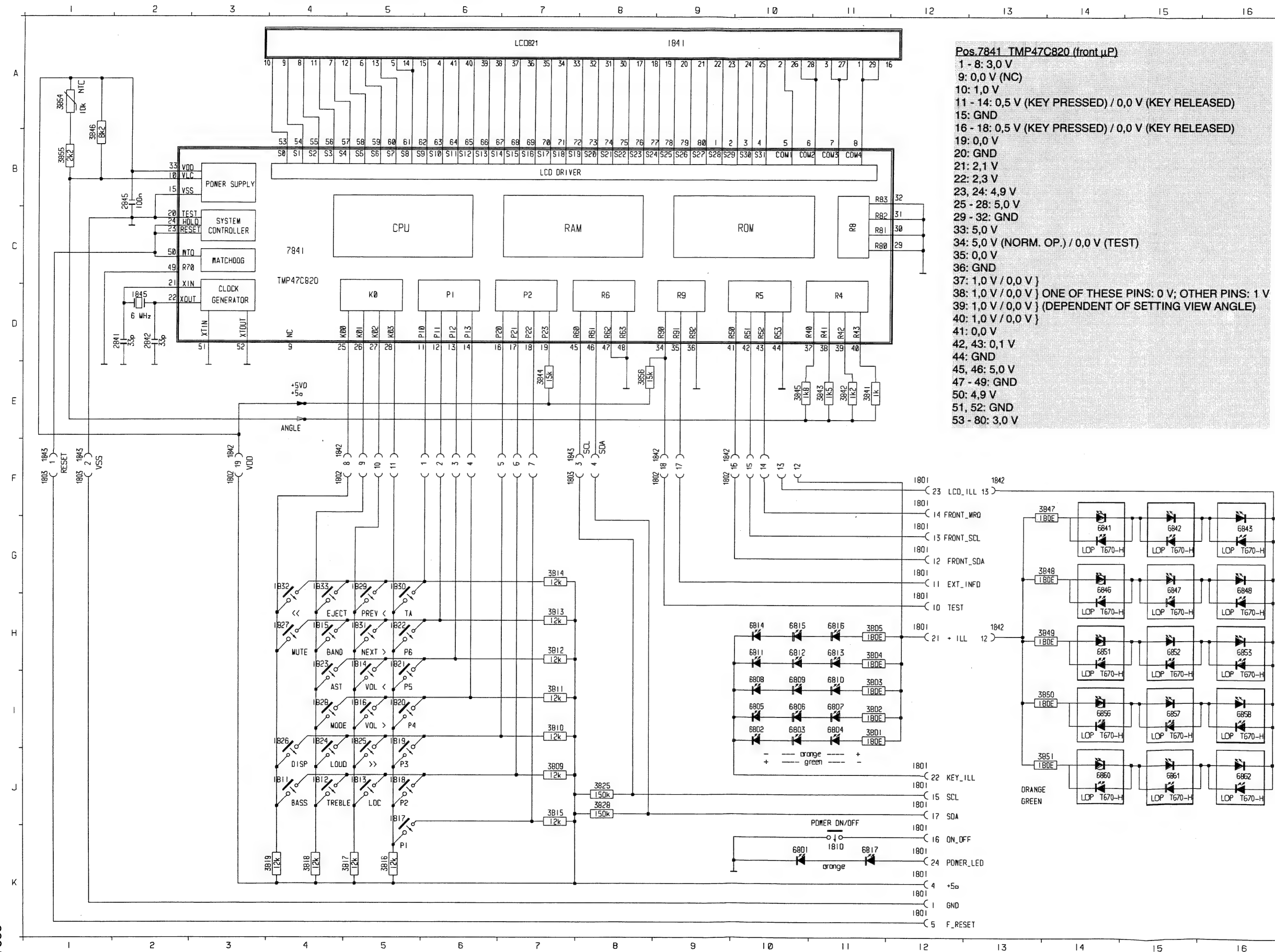


LCD PWB

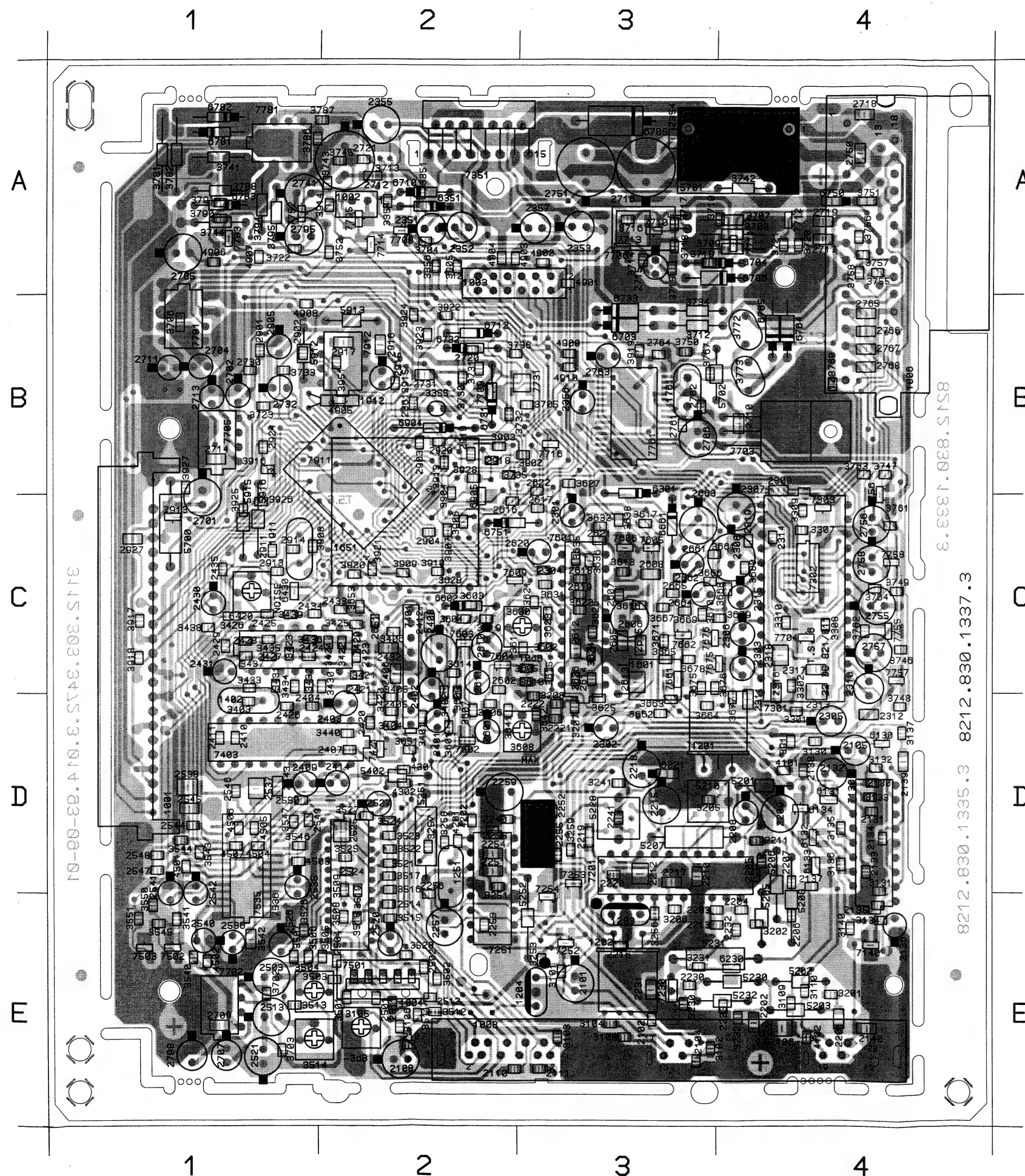
1841 A 1	2841 A 1	3842 A 2	3846 A 2	3850 A 2	3856 A 3	6846 A 1	6852 A 1	6858 A 1	7841 A 1
1842 A 3	2842 A 1	3843 A 2	3847 A 2	3851 A 2	6841 A 2	6847 A 1	6853 A 1	6860 A 1	
1843 A 1	2845 A 2	3844 A 2	3848 A 2	3854 A 2	6842 A 1	6848 A 1	6856 A 2	6861 A 1	
1845 A 1	3841 A 2	3845 A 2	3849 A 2	3855 A 2	6843 A 1	6851 A 2	6857 A 1	6862 A 1	



FRONT CIRCUIT (SWITCH + LCD)

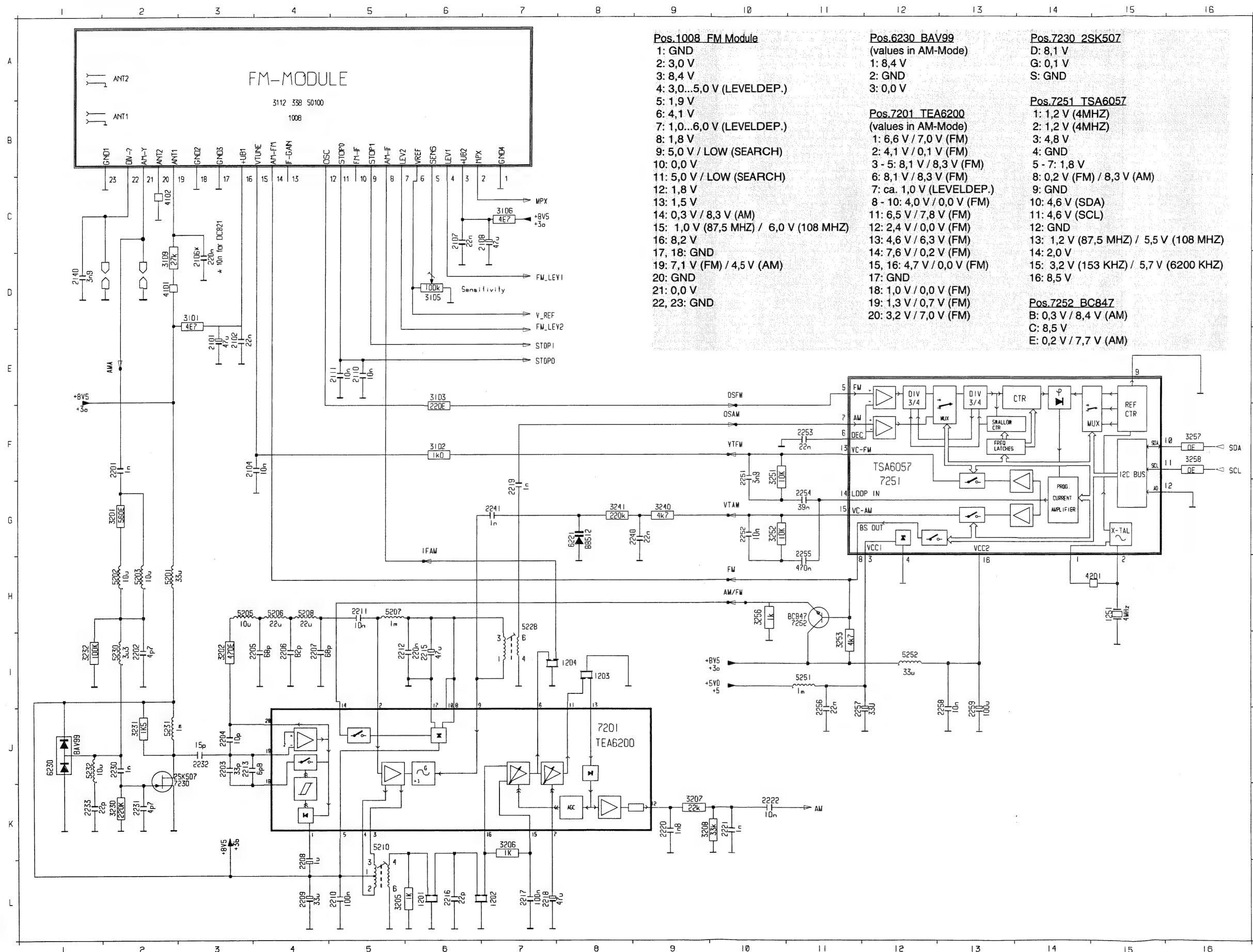


1801	K12	6801	K10
1801	K12	6802	I10
1801	K12	6803	I10
1801	H12	6804	I11
1801	G12	6805	I10
1801	G12	6806	I10
1801	G12	6807	I11
1801	F12	6808	I10
1801	J12	6809	I10
1801	J12	6810	I11
1801	J12	6811	H10
1801	H12	6812	H10
1801	J12	6813	H11
1801	F12	6814	H10
1801	K12	6815	H10
1802	F 4	6816	H11
1802	F 9	6817	K11
1802	F 9	6841	G14
1802	F 3	6842	G15
1803	F 1	6843	G16
1803	F 1	6846	G14
1803	F 7	6847	G15
1810	K11	6848	G16
1811	J 4	6851	H14
1812	J 4	6852	H15
1813	J 5	6853	H16
1814	H 5	6856	I14
1815	H 4	6857	I15
1816	I 5	6858	I16
1817	J 5	6860	J14
1818	J 5	6861	J15
1819	I 5	6862	J16
1820	I 5	7841	C 4
1821	H 5		
1822	H 5		
1823	H 4		
1824	I 4		
1825	I 5		
1826	I 4		
1827	H 4		
1828	I 4		
1829	G 5		
1830	G 5		
1831	H 5		
1832	G 4		
1833	G 4		
1841	A 9		
1842	F 4		
1842	H13		
1842	F13		
1842	F 9		
1842	F 3		
1843	F 1		
1843	F 1		
1843	F 7		
1845	D 2		
2841	D 2		
2842	D 2		
2845	B 2		
3801	I11		
3802	I11		
3803	I11		
3804	H11		
3805	H11		
3809	J 7		
3810	I 7		
3811	I 7		
3812	H 7		
3813	H 7		
3814	G 7		
3815	J 7		
3816	K 5		
3817	K 5		
3818	K 4		
3819	K 4		
3825	J 8		
3828	J 8		
3841	E11		
3842	E11		
3843	E11		
3844	E 7		
3845	E10		
3846	B 1		
3847	F14		
3848	G14		
3849	H14		
3850	I14		
3851	J14		
3854	A 1		
3855	B 1		
3856	E 8		



1001 C 1	2305 D 4	2548 D 1	2915 B 2	3439 C 1	3665 C 3	3904 B 2	6301 B 3	7781 A 1
1002 A 2	2306 C 4	2549 D 1	2916 B 2	3440 D 2	3666 C 3	3905 A 2	6351 A 2	7783 A 1
1003 B 2	2307 C 4	2550 D 1	2917 B 2	3501 E 2	3667 C 3	3906 C 2	6420 C 1	7795 A 2
1004 E 2	2308 C 4	2601 D 2	2918 B 2	3502 E 2	3668 C 4	3907 C 2	6430 C 1	7911 B 2
1006 A 4	2309 B 4	2602 C 2	2919 B 2	3503 E 2	3669 C 3	3908 C 1	6602 C 2	7912 B 2
1008 E 3	2310 C 4	2605 C 3	2920 B 2	3504 E 1	3670 C 3	3909 C 2	6661 C 3	7913 C 1
1201 D 4	2311 D 4	2606 C 3	2924 B 1	3505 E 2	3671 C 3	3910 C 2	6703 B 3	
1202 E 3	2312 D 4	2607 C 3	2927 C 1	3506 E 1	3675 C 3	3911 D 4	6704 A 3	
1203 E 3	2313 C 4	2608 C 3	3101 E 3	3507 E 1	3676 C 3	3913 B 2	6705 A 3	
1204 E 3	2314 C 4	2610 C 2	3102 E 3	3508 E 2	3677 D 4	3914 A 2	6706 A 3	
1251 D 2	2315 C 4	2611 C 2	3103 E 3	3509 D 2	3678 C 3	3915 B 2	6710 A 2	
1402 D 1	2316 C 4	2612 C 3	3104 E 3	3511 E 2	3679 C 4	3916 B 1	6712 B 2	
1601 C 3	2317 C 4	2613 C 3	3105 E 2	3512 E 2	3680 C 4	3917 C 1	6731 B 2	
1651 C 2	2318 C 4	2614 C 3	3106 E 2	3513 E 1	3702 E 1	3918 C 1	6732 B 2	
1761 B 3	2319 C 4	2615 C 3	3108 E 3	3514 E 1	3703 E 1	3919 B 3	6733 B 3	
1911 C 1	2351 A 2	2616 C 2	3109 E 4	3515 E 2	3704 A 2	3920 C 2	6750 A 4	
1912 B 1	2352 A 2	2617 C 3	3110 E 4	3516 D 2	3705 B 3	3921 C 2	6751 C 2	
2101 E 3	2353 A 3	2618 C 3	3130 D 4	3517 D 2	3706 B 1	3922 B 2	6764 B 4	
2102 E 3	2354 A 3	2619 C 3	3131 D 4	3518 E 2	3707 A 4	3923 B 2	6765 B 4	
2104 E 3	2355 A 2	2620 C 3	3132 D 4	3519 D 2	3708 A 4	3924 B 2	6781 A 1	
2105 D 4	2356 B 3	2621 C 3	3133 D 4	3520 E 2	3709 A 4	3925 C 1	6782 A 1	
2106 E 4	2357 A 3	2622 B 3	3134 E 4	3521 D 2	3710 A 4	3926 C 1	6783 A 1	
2107 E 2	2361 B 2	2626 C 3	3135 D 4	3522 D 2	3712 B 3	3927 B 1	6804 B 2	
2108 E 2	2401 D 2	2651 C 2	3136 D 4	3523 D 2	3713 A 2	3928 B 2	6905 C 2	
2110 E 2	2402 C 2	2661 C 3	3137 D 4	3524 D 2	3714 A 3	3951 B 2	7130 D 4	
2111 E 3	2403 D 2	2662 C 3	3140 E 4	3525 D 2	3715 A 3	4101 D 4	7140 E 4	
2130 D 4	2404 D 1	2663 C 3	3201 E 4	3526 E 1	3716 A 3	4102 E 4	7201 D 3	
2131 D 4	2405 D 2	2664 C 3	3202 E 4	3527 D 2	3717 A 3	4201 D 2	7230 E 3	
2132 D 4	2406 C 2	2665 C 3	3205 D 3	3540 E 1	3718 A 3	4202 D 2	7251 D 2	
2133 D 4	2407 D 2	2701 C 1	3206 E 3	3541 E 1	3719 A 3	4301 D 2	7252 E 3	
2134 D 4	2408 C 2	2702 B 1	3207 D 3	3542 E 1	3720 A 4	4302 D 2	7253 D 3	
2135 E 4	2409 D 1	2704 B 1	3208 D 3	3543 D 1	3721 A 4	4501 D 1	7254 E 3	
2136 E 4	2410 D 1	2705 A 1	3230 E 3	3544 D 1	3722 A 1	4502 E 1	7301 C 4	
2137 D 4	2411 D 1	2706 B 3	3231 E 3	3545 E 1	3723 B 1	4503 D 1	7302 C 4	
2138 D 4	2412 C 2	2707 E 1	3232 E 4	3546 D 1	3730 B 2	4504 D 1	7303 C 4	
2139 D 4	2414 D 2	2708 E 1	3240 D 3	3547 D 1	3731 B 2	4505 D 1	7351 A 2	
2140 E 4	2420 D 2	2709 E 1	3241 D 3	3550 E 1	3732 B 2	4506 D 1	7401 C 2	
2201 E 4	2421 C 2	2710 B 4	3251 D 2	3551 E 1	3733 B 1	4507 D 1	7403 D 1	
2202 E 4	2423 C 2	2711 B 1	3252 D 3	3601 D 2	3734 B 3	4901 A 3	7420 C 1	
2203 E 4	2424 C 1	2712 A 2	3253 E 3	3602 C 3	3735 B 2	4902 A 3	7421 D 2	
2204 E 4	2425 C 1	2713 B 1	3256 E 3	3603 C 2	3736 B 2	4903 A 2	7501 D 2	
2205 D 4	2426 D 1	2714 B 1	3257 D 2	3604 C 2	3741 A 1	4904 A 2	7502 E 1	
2206 E 4	2427 C 1	2715 A 3	3258 D 2	3605 C 3	3742 A 4	4905 B 2	7503 E 1	
2207 D 4	2428 C 1	2716 A 3	3259 D 3	3606 D 2	3743 A 2	4906 A 1	7535 D 1	
2208 D 4	2429 C 1	2717 A 4	3260 D 3	3607 D 2	3744 A 1	4907 A 1	7536 D 1	
2209 D 4	2430 C 1	2718 A 4	3301 D 4	3608 D 3	3745 A 2	4908 B 1	7601 C 3	
2210 D 3	2431 C 1	2719 A 4	3302 C 4	3609 C 2	3746 C 4	4909 B 3	7602 D 2	
2211 D 4	2432 C 2	2720 B 2	3307 C 4	3610 C 3	3747 B 4	4910 B 3	7603 C 2	
2212 D 3	2433 C 2	2721 A 2	3308 C 4	3611 C 3	3748 D 4	5201 D 4	7604 C 2	
2213 E 4	2434 C 1	2730 B 1	3309 C 4	3613 C 3	3749 C 4	5202 E 4	7605 C 3	
2215 D 3	2435 C 1	2731 B 2	3310 C 4	3614 C 2	3750 B 3	5203 E 4	7606 C 3	
2216 E 3	2501 E 2	2732 B 1	3351 A 2	3615 C 3	3751 A 4	5205 E 4	7609 C 2	
2217 D 3	2502 E 2	2741 A 1	3354 A 2	3616 C 3	3752 A 2	5206 D 4	7661 C 3	
2218 D 3	2503 E 1	2750 A 4	3355 B 2	3617 C 3	3753 A 4	5207 D 3	7662 C 3	
2219 D 3	2504 E 2	2751 A 3	3356 A 2	3619 C 2	3755 A 4	5208 E 4	7675 C 4	
2220 D 3	2511 E 2	2752 A 4	3401 D 2	3621 C 3	3756 A 4	5210 D 3	7676 C 3	
2221 D 3	2512 E 2	2755 C 4	3402 C 2	3622 C 3	3757 A 4	5228 D 3	7701 B 1	
2222 D 3	2513 E 1	2756 C 4	3403 D 1	3623 C 3	3758 A 4	5230 E 4	7702 E 1	
2230 E 3	2514 E 2	2757 C 4	3404 D 2	3624 C 3	3760 B 4	5231 E 3	7703 B 4	
2231 E 3	2520 E 2	2758 C 4	3405 D 2	3625 D 3	3761 C 4	5232 E 4	7704 C 4	
2232 E 4	2521 E 1	2761 B 3	3406 C 2	3626 C 3	3762 C 4	5251 D 2	7705 B 1	
2233 E 4	2524 D 2	2762 B 3	3420 D 2	3627 B 3	3763 B 4	5252 E 3	7706 A 3	
2240 D 2	2525 D 2	2763 B 3	3421 C 2	3628 C 2	3764 C 4	5402 D 2	7708 A 2	
2241 D 3	2526 E 1	2764 B 3	3422 C 2	3630 C 3	3767 B 3	5700 C 1	7709 B 2	
2251 D 2	2527 D 2	2765 B 4	3423 C 1	3631 C 3	3772 B 4	5701 A 4	7710 A 3	
2252 D 3	2535 D 1	2766 B 4	3424 C 2	3632 C 3	3773 B 4	5702 B 3	7711 A 4	
2253 E 2	2536 E 1	2767 B 4	3425 C 2	3635 C 3	3781 A 1	5912 B 1	7712 A 4	
2254 D 2	2537 D 1	2768 B 4	3426 C 1	3636 C 3	3782 A 1	5913 B 2	7713 A 3	
2255 D 3	2538 D 1	2795 A 1	3430 C 2	3638 C 3	3786 A 1	5915 C 1	7714 A 2	
2256 E 2	2540 E 1	2901 B 1	3431 C 1	3641 D 2	3787 A 2	5916 C 1	7716 B 3	
2257 E 2	2541 E 1	2902 B 1	3432 C 1	3642 D 3	3788 A 1	6130 D 4	7731 B 3	
2258 D 2	2542 E 1	2903 B 2	3433 C 1	3651 D 2	3790 A 1	6131 D 4	7752 A 1	
2259 D 2	2543 D 1	2904 C 2	3434 C 1	3653 C 2	3791 A 1	6132 D 4	7755 C 4	
2301 C 3	2544 D 1	2905 B 1	3435 C 1	3661 C 3	3794 A 1	6133 D 4	7756 C 4	
2302 D 3	2545 D 1	2911 C 1	3436 C 1	3662 D 3	3795 A 1	6134 D 4	7757 C 4	
2303 C 4	2546 D 1	2913 C 1	3437 C 1	3663 D 3	3902 B 3	6221 D 3	7758 C 4	
2304 C 3	2547 D 1	2914 C 1	3438 C 1	3664 D 3	3903 B 2	6230 E 4	7761 B 3	

FM MODUL / AM PART / PLL SYNTHESIZER



A	1008	B 4
	1201	L 6
	1202	L 7
	1203	I 8
	1204	I 8
B	1251	H15
	2101	E 3
	2102	E 3
	2104	F 3
	2106*	D 3
C	2107	C 6
	2108	C 7
	2110	E 5
	2111	E 5
	2140	D 1
D	2201	F 2
	2202	I 2
	2203	J 3
	2204	J 3
	2205	I 4
E	2206	I 4
	2207	I 4
	2208	L 4
	2209	L 4
	2210	L 5
F	2211	H 5
	2212	I 5
	2213	J 3
	2215	I 6
	2216	L 6
G	2217	L 7
	2218	L 7
	2219	G 7
	2220	K 9
	2221	K10
H	2222	K10
	2230	J 2
	2231	K 2
	2232	J 3
	2233	K 1
I	2240	G 9
	2241	G 7
	2251	F10
	2252	G10
	2253	F11
J	2254	G11
	2255	H11
	2256	J11
	2257	J11
	2258	J13
K	2259	J13
	3101	D 3
	3102	F 6
	3103	E 6
	3105	D 6
L	3106	C 7
	3109	D 2
	3201	G 2
	3202	I 3
	3205	L 5
M	3206	K 7
	3207	K 9
	3208	K 9
	3230	K 2
	3231	J 2
N	3232	I 1
	3240	G 9
	3241	G 8
	3251	F10
	3252	G10
O	3253	I11
	3256	H10
	3257	F16
	3258	F16
	4101	D 2
P	4102	C 2
	4201	H15
	5201	H 2
	5202	H 2
	5203	H 2
Q	5205	H 3
	5206	H 4
	5207	H 5
	5208	H 4
	5210	K 5
R	5228	H 7
	5230	I 2
	5231	J 2
	5232	J 1
	5231	I11
S	5252	I12
	6221	G 8
	6230	J 1
	7201	J 8

7230	J 2
7251	G12
7252	H11

Pos.7230 2SK507

D: 8,1 V
G: 0,1 V
S: GND

Pos.7251 TSA6057

1: 1,2 V (4MHZ)
2: 1,2 V (4MHZ)
3: 4,8 V
4: GND
5 - 7: 1,8 V
8: 0,2 V (FM) / 8,3 V (AM)

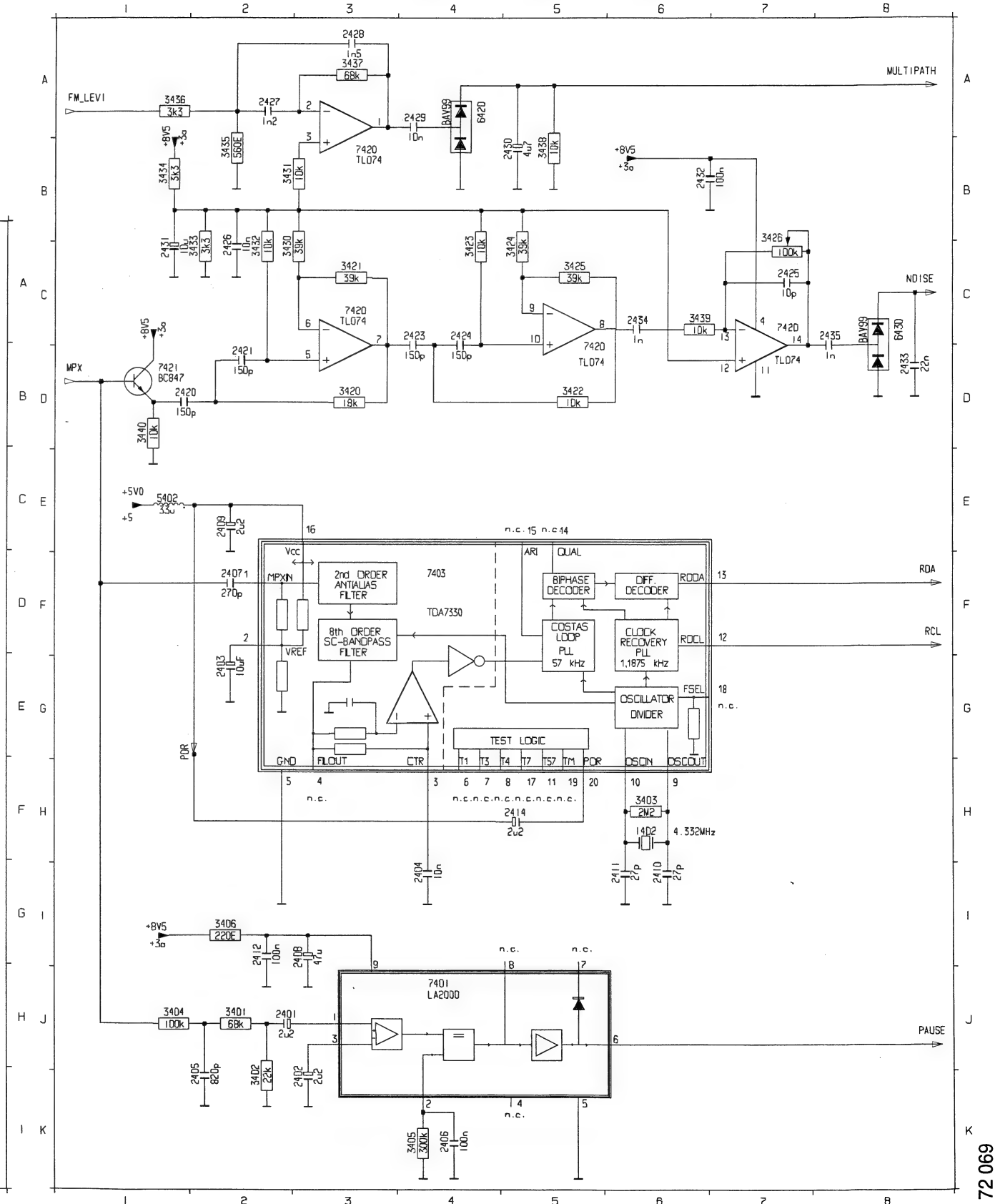
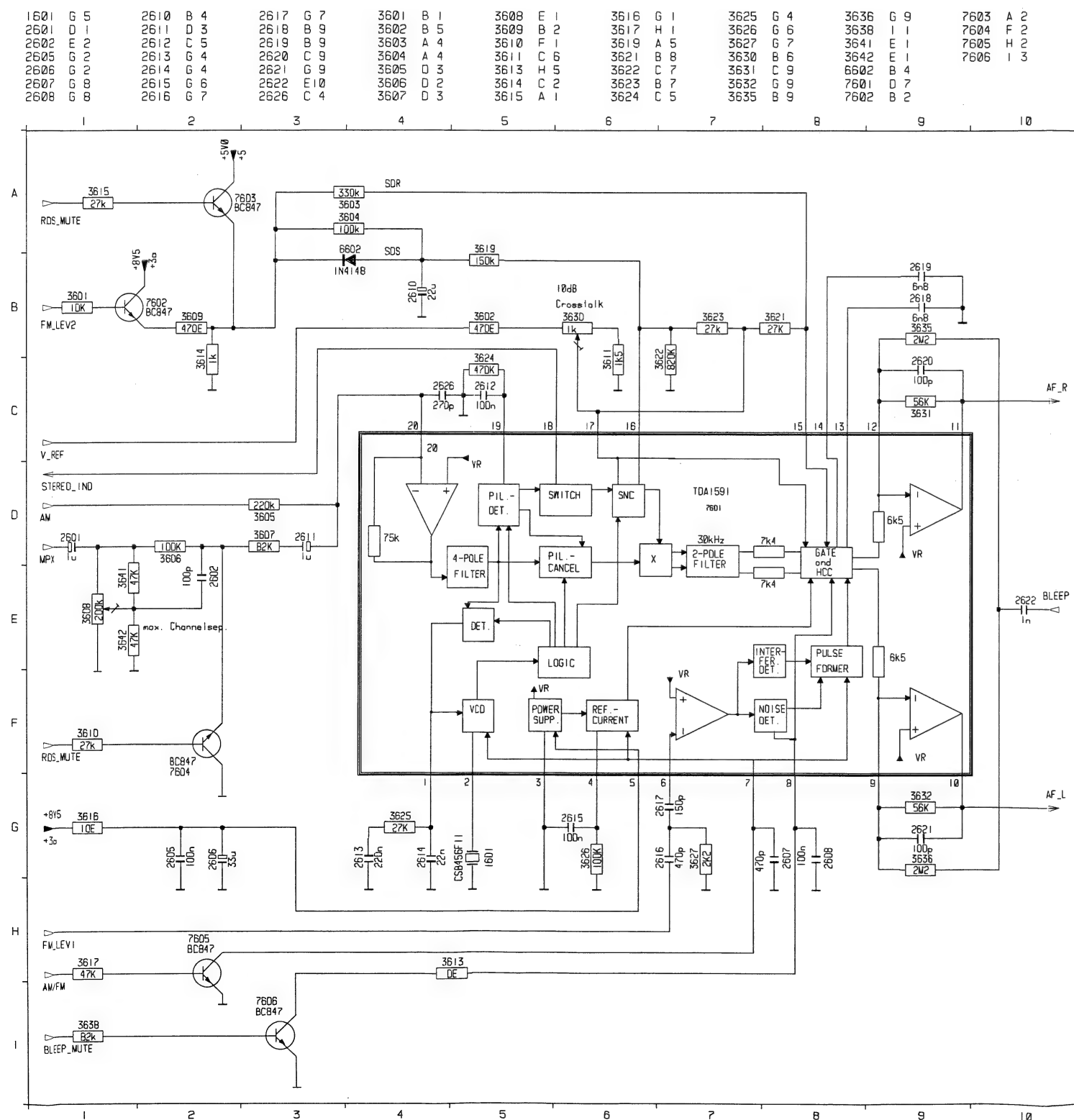
10: 4,6 V (SDA)
11: 4,6 V (SCL)
12: GND
13: 1,2 V (87,5 MHz) / 5,5 V (108 MHz)
14: 2,0 V
15: 3,2 V (153 KHZ) / 5,7 V (6200 KHZ)
16: 8,5 V

Pos.7252 BC847

B: 0,3 V / 8,4 V (AM)
C: 8,5 V
E: 0,2 V / 7,7 V (AM)

<u>Pos.7601 TDA1591</u>	<u>Pos.7602 BC847</u>	<u>Pos.7605 BC847</u>
1: 4,6 V	B: 1,0...6,0 V (LEVELDEP.)	B: 0,3 V
2: 4,3 V	C: 8,4 V	C: 2,3 V
3: GND	E: 0,0...5,0 V (LEVELDEP.)	E: GND
4: 3,0 V		
5: 8,4 V	<u>Pos.7603 BC847</u>	<u>Pos.7606 BC847</u>
6: 2,2 V	B: 0,1 V / 4 V (MUTE)	B: 0,5 V
7: 2,2 V / 0,0 V (AM)	C: 5,0 V	C: 4,4...6,3 V (LEVELDEP.)
8: 6,3 V	E: 2,4 V / 3,4 V (MUTE)	E: GND
9 - 14: 3,8 V		
15 - 17: 2,8 V	<u>Pos.7604 BC847-40</u>	
18: 5,0 V / 0,0 V (MONO)	B: 0,1 V / 0,7 V (MUTE)	
19: 0,5 V	C: GND	
20: 3,0 V	E: 0,0 V	

1402	H	6	2409	E	2	2425	C	7	2434	C	6	3421	C	3	3433	C	2	6420	A	4
2401	J	2	2410	I	6	2426	C	2	2435	C	8	3422	D	5	3434	B	1	6430	C	8
2402	K	3	2411	I	6	2427	A	2	3401	J	2	3423	C	4	3435	B	2	7401	J	4
2403	G	2	2412	I	2	2428	A	3	3402	K	2	3424	C	5	3436	A	1	7403	F	4
2404	I	4	2414	H	5	2429	A	4	3403	H	6	3425	C	5	3437	A	3	7420	B	3
2405	K	2	2420	D	1	2430	B	5	3404	J	1	3426	B	7	3438	B	5	7420	C	3
2406	K	4	2421	D	2	2431	C	1	3405	K	4	3430	C	2	3439	C	6	7420	D	5
2407	F	2	2423	C	4	2432	B	6	3406	I	2	3431	B	2	3440	D	1	7420	C	7
2408	I	3	2424	C	4	2433	D	8	3420	D	3	3432	C	2	5402	E	1	7421	D	1



uC / EEPROM / FAN / DCC CONNECTOR

Pos.6420 BAV99

1: 0,0 V
2: GND
3: 0,0 V

Pos.6430 BAV99

1: 0,0 V
2: GND
3: 0,0 V

Pos.7401 LA2000

1: 1,9 V
2: 7,1 V / 0,0 V (AM)
3: 2,0 V
4: 0,0 V (NC)
5: GND
6: 5,0 V
7: 4,3 V (NC)
8: 3,0 V (NC)
9: 7,5 V

Pos.7403 TDA7330

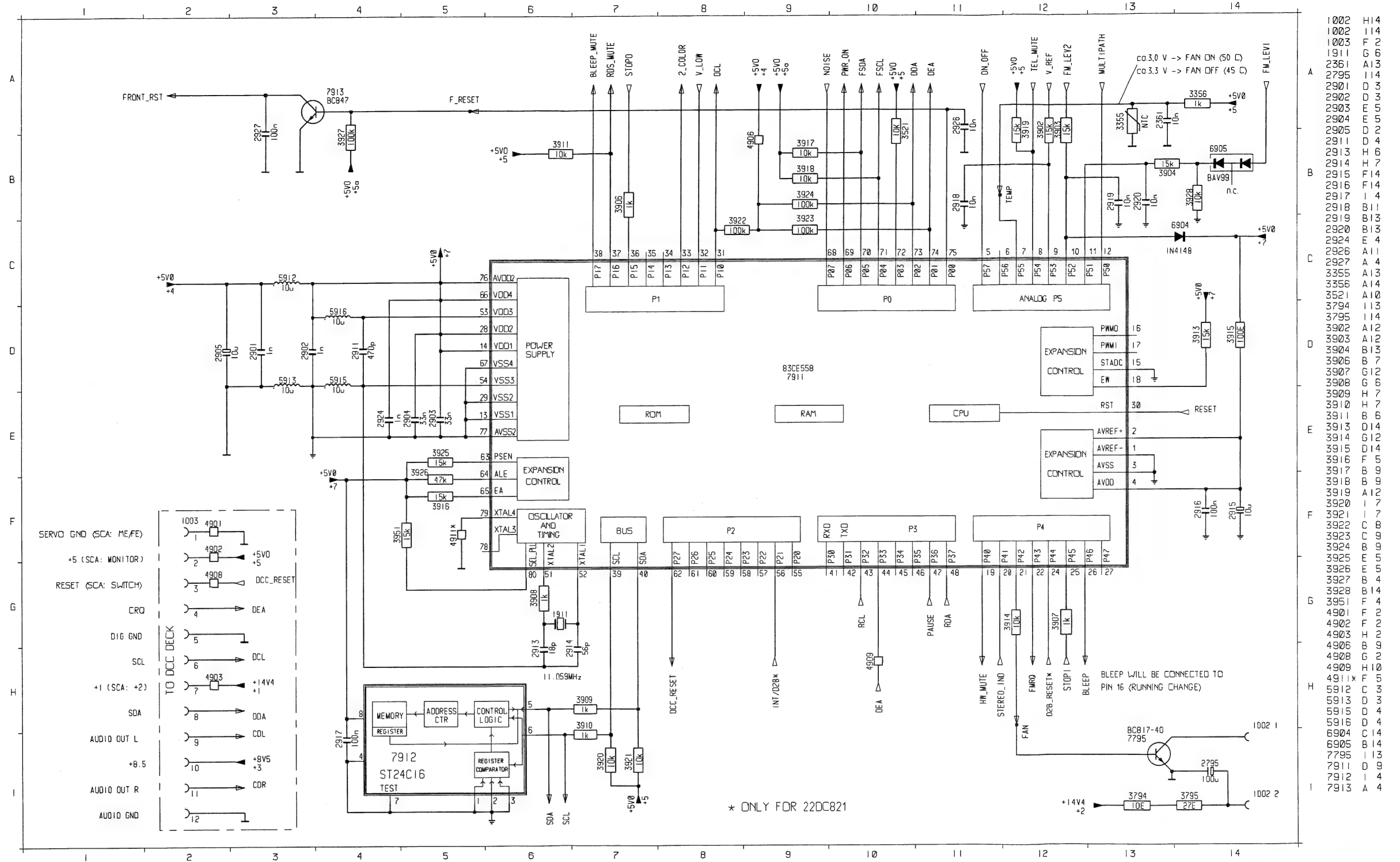
1, 2: 2,2 V
3: 1,5 V
4: 1,5 V (NC)
5: GND
6-8: NC
9, 10: 2,4 V (4,3 MHz)
11: 2,4 V (NC)
12: 2,5 V
13: ca. 1,8 V
14: 5,0 V (NC)
15: 0,1 V (NC)
16: 5,0 V
17: 0,1 V (NC)
18: 0,1 V (NC)
19: 0,1 V (NC)
20: 0,1 V

Pos.7420 TL074

1-3: 4,2 V
4: 8,5 V
5-8: 4,2 V
9: 4,3 V
10: 4,2 V
11: GND
12-14: 4,2 V

Pos.7421 BC847

B: 3,1 V
C: 8,5 V
E: 2,2...2,8 V (LEVEL DEP.)



Pos.6905 BAV99

1: 2,5...3,5 V (LEVEL DEP.)
2: 3,0...4,3 V (LEVEL DEP.)
3: 2,7...4,0 V (LEVEL DEP.)

Pos.7795 BC817-40

B: 0,1 V (FAN OFF) / 0,6 V (FAN ON)
C: 14,2 V (FAN OFF) / 1,6 V (FAN ON)
E: GND

Pos.7911 89CE558 (P)

1: GND
2: 5,0 V
3: GND
4: 5,0 V
5: 5,0 V
6: 0,4 V
7: 4,1 V
8: 4,6 V / 0,6 V (PHONE)
9: 4,0 V
10: 1,0...6,0 V (LEVEL DEP.)
11: 3,0...5,0 V (LEVEL DEP.)
12: 0,0 V
13: GND
14: 5,0 V
15: GND
16, 17: 5,0 V (NC)
18: 5,0 V
19: 0,1 V
20: 0,1 V (MO) / 5,0 V (ST)
21: 0,1 V
22: ca. 4,7 V
23: 0,1 V (NC)
24: 5,0 V (NC)
25: 5,0 V / LOW (SEARCH)
26: 0,5 V OR 5,0 V (AT BLEEP)
27: 5,0 V (NC)
28: 5,0 V
29: GND

30: 0,1 V
31, 32: 5,0 V
33: 5,0 V (ORANGE) / 0,1 V (GREEN)
34: 5,0 V (NC)
35: 0,0 V (NC)
36: 5,0 V / LOW (SEARCH)
37: 0,0 V / 4,4 V (SEARCH MUTE)
38: 0,1 V
39: 4,9 V (SCL)
40: 4,9 V (SDA)
41: 5,0 V (NC)
42: 5,0 V (NC)
43: 2,5 V
44: 5,0 V (RADIO OP.)

45: 5,0 V (NC)
46: 0,1 V (NC)
47: 5,0 V (V48) / ca. 2,0 V
49, 50: 0,0 V (NC)
51: 2,4 V Veff (11,0 MHz) / 2,3 Vdc
52: 0,7 Veff (11,0 MHz) / 2,1 Vdc
53: 5,0 V
54: 0,1 V
55-61: 5,0 V (NC)
62: 5,0 V
63: 5,0 V
64: 0,0 V (ON) / 5,0 V (OFF)
65: 5,0 V
66: 5,0 V

67: GND
68: 0,1 V
69: 0,1 V
70: 4,9 V (FSDA)
71: 4,9 V (FSCL)
72: 5,0 V (NC)
73: 4,8 V
74: 5,0 V
75: 0,1 V
76: 5,0 V
77: GND
78, 79: 0,0 V (NC)
80: 5,0 V (OSC)

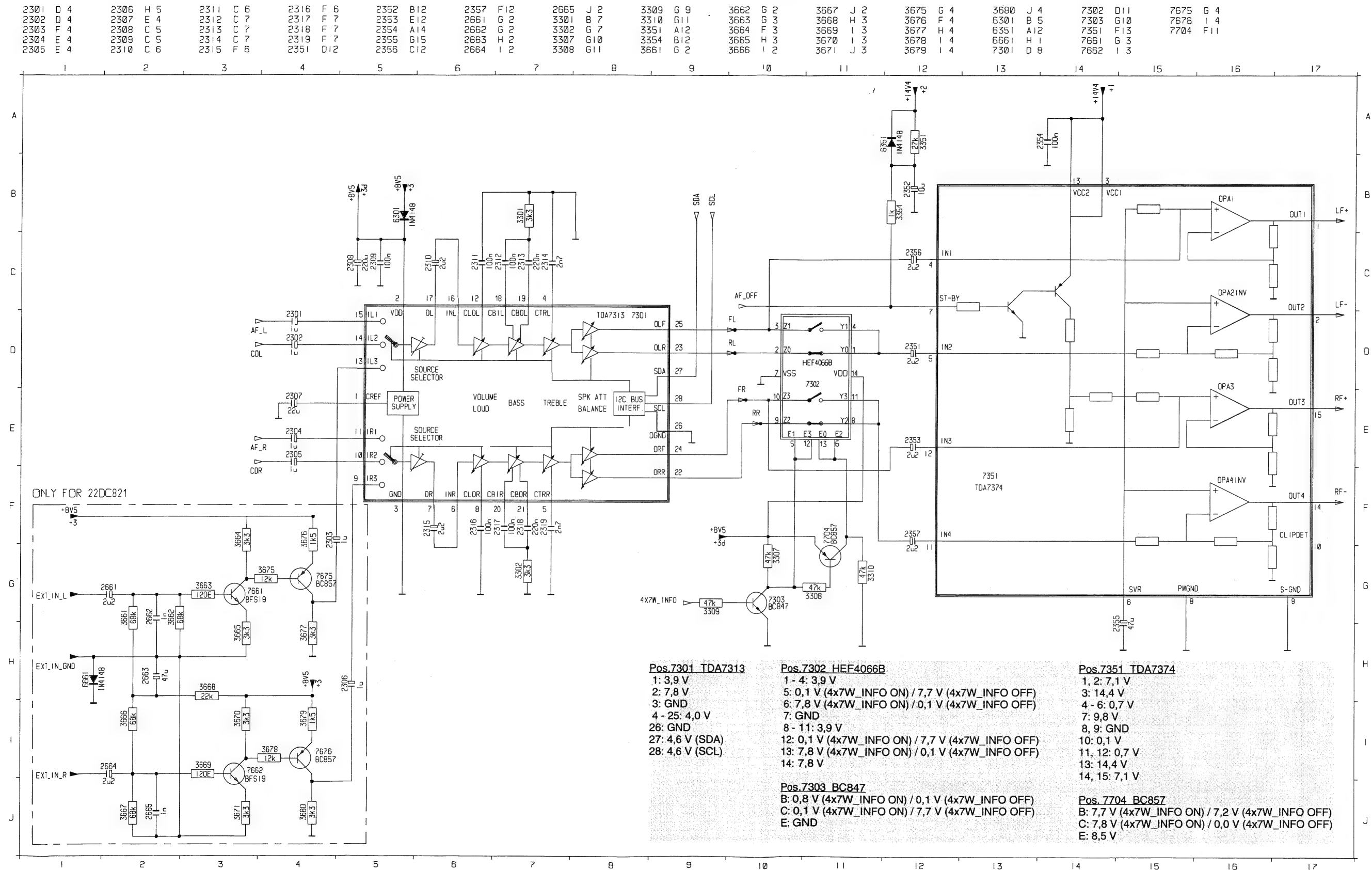
Pos.7912 ST24C16

1-4: GND
5: 4,6 V (SDA)
6: 4,6 V (SCL)
7: GND
8: 5,0 V

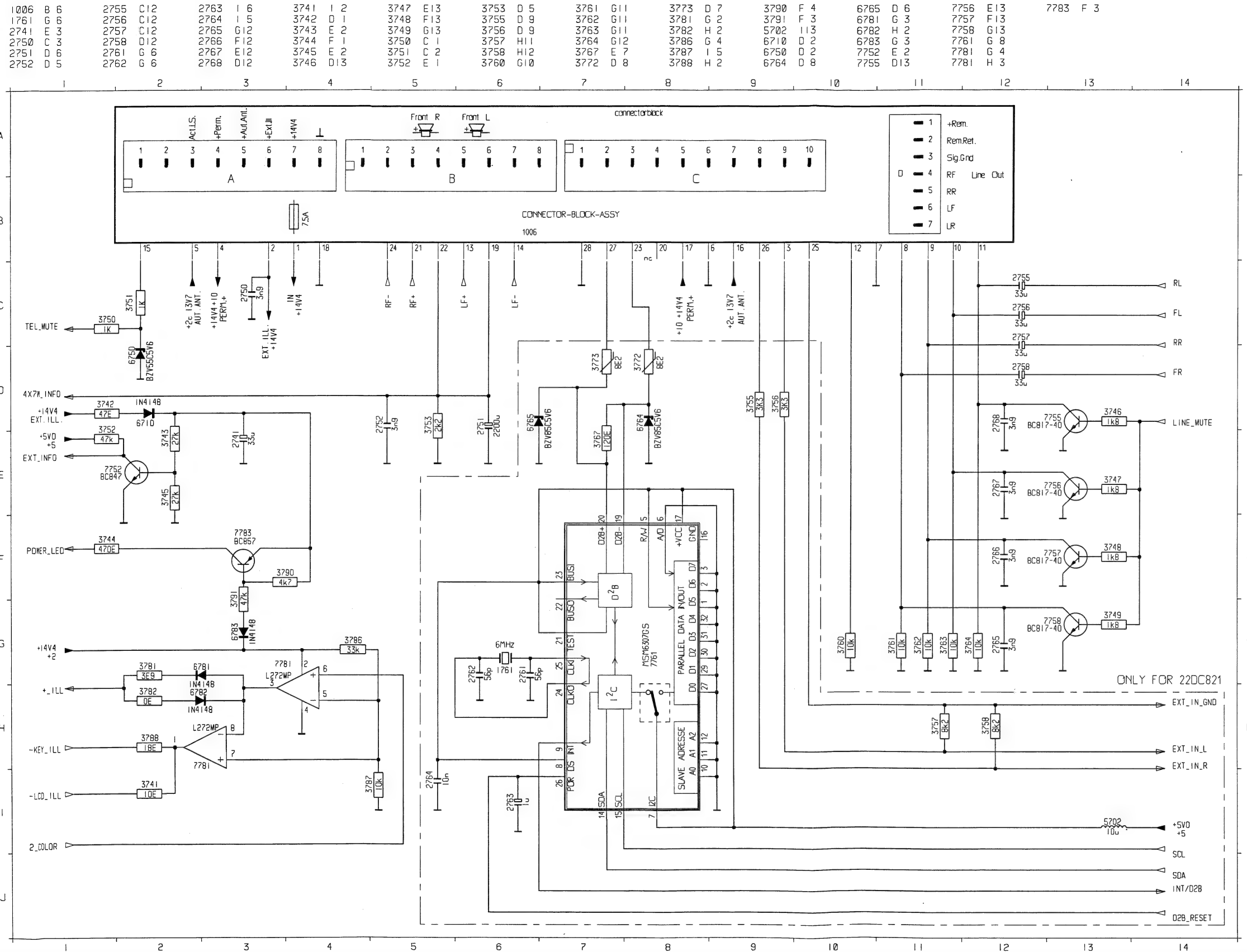
Pos.7913 BC847

B: 0,1 V / 0,6 V (F_RES.)
C: 4,9 V
E: GND

AUDIO CONTROL / AF POWER STAGE



CONNECTOR / CHANGER INTERFACE



Pos. 7752 BC847
B: 0,7 V (OFF) / 0,8 V (ON)
C: 0,0 V (OFF) / 0,1 V (ON)
E: GND

Pos. 7755 BC817-40
B: 0,0 V / 0,5 V (LINE MUTE)
C: 0,1 V
E: GND

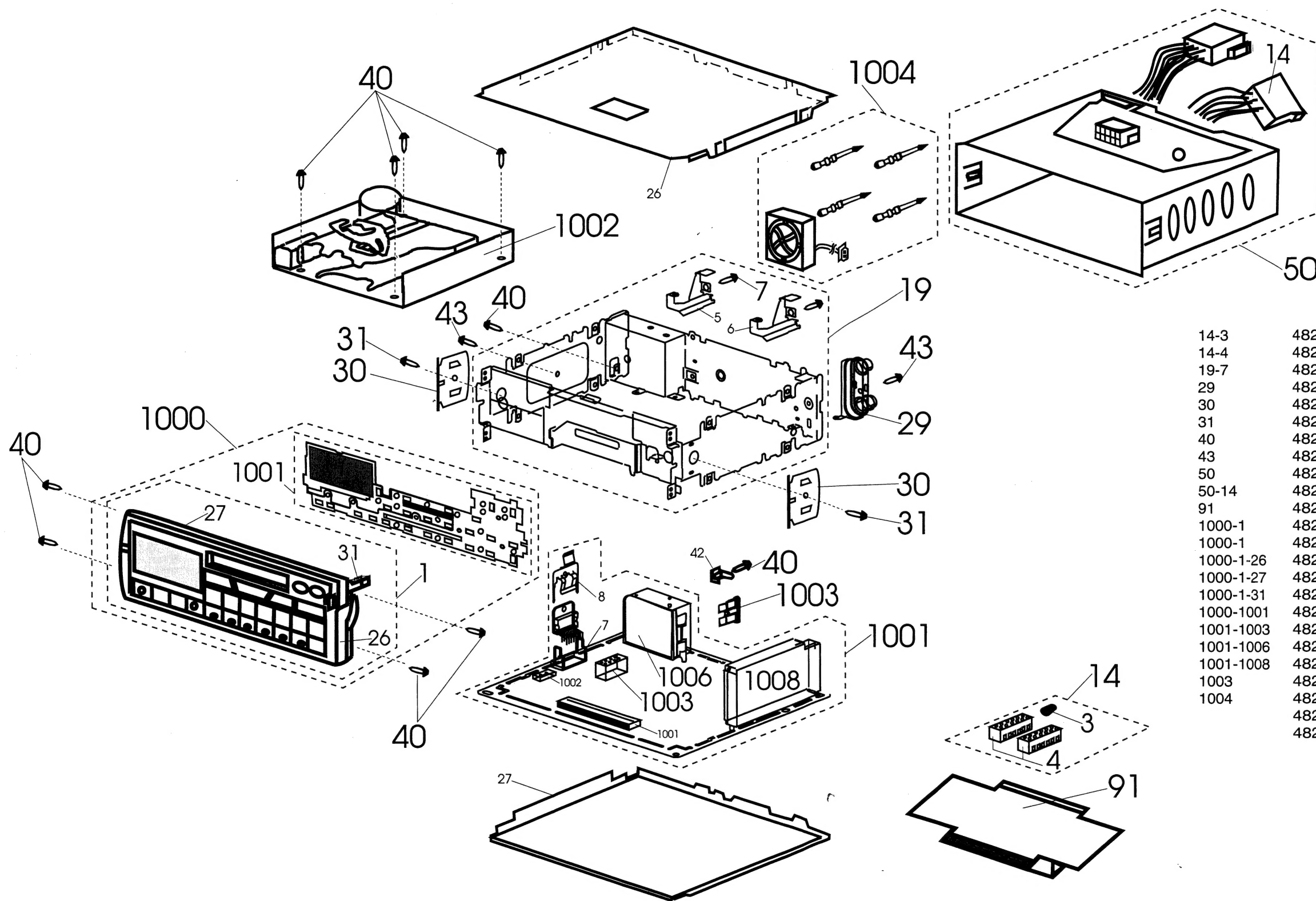
Pos. 7756 BC817-40
B: 0,0 V / 0,5 V (LINE MUTE)
C: 0,1 V
E: GND

Pos. 7757 BC817-40
B: 0,0 V / 0,5 V (LINE MUTE)
C: 0,1 V
E: GND

Pos. 7758 BC817-40
B: 0,0 V / 0,5 V (LINE MUTE)
C: 0,1 V
E: GND

Pos. 7781 L272MP
1: 1,0 V (RED DISPLAY) / 13,3 V (GREEN DISPLAY)
2: 14,2 V
3: 13,3 V (RED) / 1,0 V (GREEN)
4: GND
5: 3,4 V
6: 5,1 V (RED) / 0,1 V (GREEN)
7: 3,4 V
8: 13,3 V (RED) / 1,0 V (GREEN)

Pos. 7783 BC857
B: 12 V (OFF) / 13,9 V (ON)
C: 12,3 V (OFF) / 0,0 V (ON)
E: 12,8 V (OFF) / 13,9 V (ON)



14-3	4822	532	11092	BUFFER MOUNTING
14-4	4822	267	41036	CONNECTOR MOUNTING 6P
19-7	4822	502	11715	SCREW M2,5X5
29	4822	268	20224	AERIAL SOCKET
30	4822	404	21234	SPRING FIXATION
31	4822	502	12866	SCREW M3X5
40	4822	502	11715	SCREW M2,5X5
43	4822	502	12796	SCREW M2,5X12
50	4822	691	10414	SLEEVE RETRAC
50-14	4822	321	61534	CABLE,CONNECT.POWER
91	4822	015	20646	DCC CLEANING CASS.SBC3500
1000-1	4822	459	50818	ORN.PLATE ASSY DC811
1000-1	4822	701	13894	ORN.PLATE ASSY DC821
1000-1-26	4822	498	40585	RETRAC HANDLE
1000-1-27	4822	464	70588	FRAME COVER
1000-1-31	4822	492	71083	SPRING FOR HANDLE
1000-1001	4822	214	52171	FRONT PWB COMBINATION
1001-1003	4822	267	51329	CONNECTOR 12P
1001-1006	4822	290	61114	CONNECTORBLOCK ASSY
1001-1008	4822	210	10589	FM MODUL
1003	4822	071	27502	FUSE 7.5A
1004	4822	515	20135	COOLING FAN ASSY
	4822	736	21941	DIRECT. FOR USE DC811
	4822	736	22038	DIRECT. FOR USE DC821

MISCELLANEOUS

1201	4822 242 72076	CRYSTAL	10,7 MHZ
1202	4822 242 72076	CRYSTAL	10,7 MHZ
1203	4822 242 71883	CERAM FILTER	SFE10,7MS318-D
1204	4822 242 71883	CERAM FILTER	SFE10,7MS318-D
1251	4822 242 71874	CRYSTAL	4,000 MHZ
1402	4822 242 72195	CRYSTAL	4,332 MHZ
1601	4822 242 81117	RESONATOR	CSB456F11
1761	4822 242 81659	RESONATOR	CST 5,75 MHZ
1810...			
1833	4822 276 20521	SWITCH,PUSHBUT.	
1911	4822 242 81646	CRYSTAL	11.059 MHZ

CAPACITORS

2101	4822 124 22646	ELCAP	47UF	20%	16V
2102	5322 122 32654	CAP.CHIP	22NF	10% X7R63V	
2104	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2106	4822 122 33177	CAP.CHIP	10NF	10%	
2106	4822 122 32916	CAP.CHIP	220NF	10% X7R63V	
2107	5322 122 32654	CAP.CHIP	22NF	10% X7R63V	
2108	4822 124 40177	ELCAP	47UF	20%	10V
2110	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2111	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2140	4822 122 32566	CAP.CHIP	3,9NF	10% X7R63V	
2201	5322 122 31647	CAP.CHIP	1NF	10% X7R63V	
2202	4822 122 32082	CAP.CHIP	4,7PF	5%	50V
2203	5322 122 32659	CAP.CHIP	33PF	5%	50V
2204	5322 122 32448	CAP.CERAMIC	10PF	5%	50V
2205	4822 122 33514	CAP.CHIP	68PF	5% NPO	50V
2206	4822 122 33515	CAP.CHIP	82PF	5% NPO	63V
2207	4822 122 33514	CAP.CHIP	68PF	5% NPO	50V
2208	4822 124 23282	ELCAP	1UF	20%	50V
2209	4822 124 23281	ELCAP	33UF	20%	16V
2210	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2211	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2212	4822 122 32916	CAP.CHIP	220NF	10% X7R63V	
2213	4822 126 11179	CAP.CHIP	6,8PF	5%	
2215	4822 124 22646	ELCAP	47UF	20%	16V
2216	5322 122 32658	CAP.CHIP	22PF	5%	50V
2217	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2218	4822 124 22646	ELCAP	47UF	20%	16V
2219	4822 122 33178	CAP.CHIP	1NF	20%	
2219	4822 121 51354	CAP.FOIL	1NF	10%	50V
2220	4822 122 33219	CAP.CHIP	1,8NF	10% X7R50V	
2221	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2222	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2230	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2231	4822 122 32082	CAP.CHIP	4,7PF	5%	50V
2232	5322 122 33869	CAP.CHIP	15PF	5% NPO	63V
2233	5322 122 32658	CAP.CHIP	22PF	5%	50V
2240	5322 122 32654	CAP.CHIP	22NF	10% X7R63V	
2241	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2241	4822 121 51354	CAP.FOIL	1NF	10%	
2251	4822 122 32566	CAP.CHIP	3,9NF	10% X7R63V	
2252	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2253	5322 122 32654	CAP.CHIP	22NF	10% X7R63V	
2254	4822 122 33608	CAP.CHIP	39NF	10% X7R63V	
2255	4822 121 43711	CAP.FOIL	470NF	10%	100V
2256	5322 122 32654	CAP.CHIP	22NF	10% X7R63V	
2257	4822 124 23281	ELCAP	33UF	20%	16V
2258	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2259	4822 124 80453	ELCAP	100UF	20%	10V
2263	4822 051 20008	RES.CHIP	JMPR		
2301...					
2306	4822 124 23282	ELCAP	1UF	20%	50V
2307	4822 124 23279	ELCAP	22UF	20%	16V
2308	4822 124 23582	ELCAP	220UF		10V
2309	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2310	4822 124 23504	ELCAP	2,2UF	20%	50V
2311	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2312	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2313	4822 122 32916	CAP.CHIP	220NF	10% X7R63V	
2314	4822 122 32627	CAP.CERAMIC	2,7NF	10% X7R50V	
2315	4822 124 23504	ELCAP	2,2UF	20%	50V
2316	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2317	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2318	4822 122 32916	CAP.CHIP	220NF	10% X7R63V	
2319	4822 122 32627	CAP.CERAMIC	2,7NF	10% X7R50V	
2351	4822 124 80726	ELCAP	2,2UF	20%	50V
2352	4822 124 80813	ELCAP	10UF	20%	16V
2353	4822 124 80726	ELCAP	2,2UF	20%	50V
2354	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2355	4822 124 80724	ELCAP	47UF	20%	10V
2356	4822 124 23504	ELCAP	2,2UF	20%	50V
2357	4822 124 80726	ELCAP	2,2UF	20%	50V
2361	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2401	4822 124 23504	ELCAP	2,2UF	20%	50V
2402	4822 124 23504	ELCAP	2,2UF	20%	50V
2403	4822 124 41017	ELCAP	10UF		16V
2404	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	

2405	4822 122 33218	CAP.CHIP	820PF	10% X7R	
2406	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2407	4822 122 33216	CAP.CHIP	270PF	5% NPO	50V
2408	4822 124 22646	ELCAP	47UF	20%	16V
2409	4822 124 23504	ELCAP	2,2UF	20%	50V
2410	5322 122 31946	CAP.CHIP	27PF	10%	50V
2411	5322 122 31946	CAP.CHIP	27PF	10%	50V
2412	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2414	4822 124 23504	ELCAP	2,2UF	20%	50V
2420...					
2424	5322 122 33538	CAP.CHIP	150PF	2% NPO	63V
2425	5322 122 32448	CAP.CERAMIC	10PF	5%	50V
2426	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2427	4822 122 32614	CAP.CERAMIC	1,2NF	10% X7R50V	
2428	5322 122 31865	CAP.CHIP	1,5NF	10% X7R63V	
2429	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2430	4822 124 23401	ELCAP	4,7UF	20%	25V
2431	4822 124 41017	ELCAP	10UF		16V
2432	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2433	5322 122 32654	CAP.CHIP	22NF	10% X7R63V	
2434	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2435	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2601	4822 124 23282	ELCAP	1UF	20%	50V
2602	5322 122 32531	CAP.CHIP	100PF	5% NPO	50V
2605	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2606	4822 124 23281	ELCAP	33UF	20%	16V
2607	5322 122 32268	CAP.CHIP	470PF	10%	50V
2608	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2610	4822 124 23279	ELCAP	22UF	20%	16V
2611	4822 124 23282	ELCAP	1UF	20%	50V
2612	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2613	4822 122 32916	CAP.CHIP	220NF	10% X7R63V	
2614	5322 122 32654	CAP.CHIP	22NF	10% X7R63V	
2615	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2616	5322 122 32268	CAP.CHIP	470PF	10%	50V
2617	5322 122 33538	CAP.CHIP	150PF	2% NPO	63V
2617	5322 122 32531	CAP.CHIP	100PF		
2618	5322 122 31866	CAP.CHIP	6,8NF	10% X7R63V	
2619	5322 122 31866	CAP.CHIP	6,8NF	10% X7R63V	
2620	5322 122 32531	CAP.CHIP	100PF	5% NPO	50V
2621	5322 122 32531	CAP.CHIP	100PF	5% NPO	50V
2622	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2626	4822 122 33216	CAP.CHIP	270PF	5% NPO	50V
2661	4822 124 23504	ELCAP	2,2UF		
2662	4822 122 33178	CAP.CHIP	1NF		
2663	4822 124 22646	ELCAP	47UF		
2664	4822 124 23504	ELCAP	2,2NF		
2665	4822 122 33178	CAP.CHIP	1NF		
2701	4822 124 23281	ELCAP	33UF	20%	16V
2702	4822 124 41017	ELCAP	10UF		16V
2704	4822 124 23282	ELCAP	1UF	20%	50V
2705	4822 124 23281	ELCAP	33UF	20%	16V
2706	4822 124 23281	ELCAP	33UF	20%	16V
2707	4822 124 41017	ELCAP	10UF		16V
2708	4822 124 41017	ELCAP	10UF		16V
2709	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2710	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2711	4822 124 23282	ELCAP	1UF	20%	50V
2712	4822 124 80815	ELCAP	470UF	20%	16V
2713	4822 124 41017	ELCAP	10UF		16V
2714	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2715	4822 124 80725	ELCAP	1UF	20%	50V
2716	4822 124 42409	ELCAP	2200UF	20%	16V
2717...					
2719	4822 122 32566	CAP.CHIP	3,9NF	10% X7R63V	
2720	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2721	5322 122 31866	CAP.CHIP	6,8NF	10% X7R63V	
2730	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2731	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2732	4822 124 23504	ELCAP	2,2UF	20%	50V
2741	4822 124 80814	ELCAP	33UF	20%	16V
2750	4822 122 32566	CAP.CHIP	3,9NF	10% X7R63V	
2751	4822 124 42409	ELCAP	2200UF	20%	16V
2752	4822 122 32566	CAP.CHIP	3,9NF	10% X7R63V	
2755...					
2758	4822 124 23281	ELCAP	33UF	20%	16V
2763	4822 124 23282	ELCAP	1UF		
2764	4822 122 33177	CAP.CHIP	10NF		
2765...					
2768	4822 122 32566	CAP.CHIP	3,9NF	10% X7R63V	
2795	4822 124 23255	ELCAP	100UF		16V
2901	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2902	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2903	4822 122 33342	CAP.CHIP	33NF	10% X7R63V	
2904	4822 122 33342	CAP.CHIP	33NF	10% X7R63V	
2905	4822 124 41017	ELCAP	10UF		16V
2911	5322 122 32268	CAP.CHIP	470PF	10%	50V
2913	5322 122 32965	CAP.CERAMIC	18PF	5% NPO	50V
2914	5322 122 32661	CAP.CHIP	56PF	5%	50V
2915	4822 124 41017	ELCAP	10UF		16V

2916	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2917	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	
2918...					
2920	4822 122 33177	CAP.CHIP	10NF	20% X7R50V	
2924	4822 122 33178	CAP.CHIP	1NF	20% X7R50V	
2927	4822 122 33496	CAP.CHIP	100NF	10% X7R63V	

RESISTORS

3101	4822 051 20478	RES.CHIP	4R70	5%	0,1W
3102	4822 051 20102	RES.CHIP	1K00	5%	0,1W
3103	4822 051 20221	RES.CHIP	220R00	5%	0,1W
3105	4822 100 11163	POTM.TRIMMER	100K	30%LIN	0,1W
3106	4822 051 20478	RES.CHIP	4R70	5%	0,1W
3109	4822 051 20273	RES.CHIP	27K00	5%	0,1W
3201	4822 051 20561	RES.CHIP	560R00	5%	0,1W
3202	4822 051 20471	RES.CHIP	470R00	5%	0,1W
3205	4822 051 20102	RES.CHIP	1K00	5%	0,1W
3206	4822 051 20102	RES.CHIP	1K00	5%	0,1W
3207	4822 051 20223	RES.CHIP	22K00	5%	0,1W
3208	4822 051 20333	RES.CHIP	33K00	5%	0,1W
3230	4822 051 20224	RES.CHIP	220K00	5%	0,1W
3231	4822 051 20152	RES.CHIP	1K50	5%	0,1W
3232	4822 051 20104	RES.CHIP	100K00	5%	0,1W
3240	4822 051 20472	RES.CHIP	4K70	5%	0,1W
3241	4822 051 20224	RES.CHIP	220K00	5%	0,1W
3253	4822 051 20472	RES.CHIP	4K70	5%	0,1W
3256	4822 051 20102	RES.CHIP	1K00	5%	0,1W
3257	4822 051 20008	RES.CHIP	0R00	JUMP.	(080)
3258	4822 051 20008	RES.CHIP	0R00	JUMP.	(080)
3301	4822 051 20332	RES.CHIP	3K30	5%	0,1W
3302	4822 051 20332	RES.CHIP	3K30	5%	0,1W

Service
Service
Service

22DC811/00R

22DC821/00R

5101

Service Information

1. The exchange procedure for complete sets is no longer valid. Repairs of faults belonging to the set can now be done in your service shop. The hints on the backside can maybe help you in some cases.
Because of some intermitten effects with sets built with RC 1 we recommend to update these radios to RC 2. Use IC 4822 209 33973 on pos. 7911.
For other changes and modifications of the sets see also Service Newsletters from issue 1994-W 02 onwards.
2. For the DCC tape decks use the CENTRAL REPAIR PROCEDURE of Philips Consumer Service from now on.
Information about this procedure (same as for CD deck CMX200) you can get from

Mr. Cor Lieberwirth
Philips Consumer Electronics B.V.
Philips Consumer Service
Beukenlaan 2, Building SBP 5
5600 MD Eindhoven
The Netherlands

All sets 22DC811 and 22DC821 have a DCC deck with software RC26 (4822 691 21024).
This decks will gradually be replaced by RC27 - versions (4822 691 10442) in service stock of Consumer Service Eindhoven.
A sticker on the backside of the digital print shows the version:

DCC DA26	RC26 (OTP)
DCC DA26-077	RC26 (MASK)
DCC DA27	RC27 (OTP)
DCC DA27-077	RC27 (MASK)

RC27 deck software is only usable with radio software RC2 !
22DC811 and 22DC821 sets with RC1 must get a software update to RC2 when a RC27 deck will be installed !

Use also the insulation cover 4822 423 41288 to protect the flex foil against damage and the control PWB against short circuit with the frame ! (see Service Manual 22DC822)

When 22DC811 is updated to RC2 it will show some different behaviour:

1. After Power on DCC821 appears instead of DCC811
2. During volume adjustment VOL XX appears in the display
3. BLEEP is disabled (solder a wire between pins 16 and 26 of Main processor to enable BLEEP again)

4822 725 23525



PHILIPS

COMPLAINT, SET RELATED	REASON	SOLUTION IN PRODUCTION	SERVICE SOLUTION
No function/obscure behaviour	Set with OTP-IC, software crash EEPROM defect	Only mask programmed IC's used Check incoming goods	Change OTP into mask (see Service Newsletter 1994-W 02) Send set to Wetzlar for new programming
Switch off by itself, RDS mutes	Wrong value of chip capacitor pos.2911	Value changed into 33 nF	Change pos.2911 into 33 nF (see Service Newsletter 1994-W 02)
No sound	TDA7374 defect, wrong speaker connection	Sticker added on retrac	Exchange TDA 7374, inform customer
No function, no display	Bad soldered frontconnector	Better check	Solder all pins
COMPLAINT, DECK RELATED			
Deck no function, no insert possible	Fixing hook of pivot plate broken Hang out of loading, burr at locking lever Servomotor loose, bracket broken Loading sticks at guiding rod Cassette retainer of carrier/lift assy out of shape Control PWB defect	Hook changed in production Locking lever modified in production Modification of bracket Guiding rod changed in production Modification of retainer Check incoming goods	Exchange deck Exchange deck Exchange deck Exchange deck Exchange carrier/lift assy Exchange control PWB
Drift + Flutter	Pivot plate not greased	Capstan bearing greased separately	Grease bearing
DCC interruptions, TAPE displayed while DCC	Flex foil at control PWB broken	Mounting of PWB changed in production	Exchange control PWB
DCC and/or analog cassette no playback	Head dirty		Clean head, ask customer for regular cleaning Exchange head, new alignments necessary (see Manual)
No sound from tape deck	Audio PWB defect	Check incoming goods	Exchange PWB, new alignments necessary (see Manual)
No DCC playback when warm	Bad adjustment of capstan	Better check	Exchange deck
No or bad sound from DCC	Digital/DAC PWB defect	Check incoming goods	Exchange PWB, new alignments necessary (see Manual)
Cassette jammed	Carrier/lift and lift rod jammed	Improvement of carrier/lift assy	Exchange carrier/lift assy